REMARKS

By this Amendment, claims 16 and 21 are amended, and claims 17, 19, 25-28 and 30-31 are cancelled. Claims 22-23 remain in the application. Thus, claims 16 and 21-23 are active in the application. Reexamination and reconsideration of the application are respectfully requested.

In item 3 on page 2 of the Office Action, claims 16-17, 19, 21-23, 25-28 and 30-31 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,320,326 to Shino et al. in view of Kanazawa et al. (U.S. 6,288,692). Further, in item 4 on page 4 of the Office Action, claims 16-17, 19, 21-23, 26-28 and 30-31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kanazawa et al. in view of Shino et al. These rejections are believed to moot with respect to claims 17, 19, 25-28 and 30-31 in view of the cancellation of these claims.

Claim 16 has been amended to include the limitations originally presented in cancelled claims 17 and 25. In item 5 on page 7 of the Office Action, claim 25 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kanazawa et al. in view of Shino et al. and further in view of Yamada (U.S. 6,275,203). The Applicants respectfully submit that claims 16 and 21-23 are clearly patentable over Shino et al., claims 1-8 of Shino et al., Kanazawa et al. and Yamada for the following reasons.

The present invention provides an alternating current (AC) plasma display panel having a first substrate 8 and a second substrate 14 that are disposed facing each other to form a discharge space 18 therebetween. At least one of the first substrate 8 or the second substrate 14 is transparent. A plurality of display electrodes are disposed over the first substrate 8 and are arranged in rows. Each display electrode comprises a scan electrode 10 and a sustain electrode 11. One or more conductors 12 are disposed over the first substrate 8, and each of the conductors 12 are adjacent to a respective one of the display electrodes. Further, each of the conductors 12 are spaced away from the scan electrode 10 and the sustain electrode 11 of a respective one of the display electrodes, and each of the conductors 12 are electrically connected to the sustain electrode 11 of a respective one of the display electrodes.

As described in paragraphs [0025]-[0028] on pages 7-9 of the substitute specification, the scan electrodes 10 and the sustain electrodes 11 cause a discharge to a phosphor to emit light for display through a writing period and a subsequent erasing period. Furthermore, the conductors 12 are arranged so that, when a pulse voltage is applied to the display electrodes, currents run through the conductors 12 in a reverse direction to a current running through the display electrodes. Further, the conductors are operable to generate an electromagnetic wave having a polarity that is reverse to a polarity of an electromagnetic wave that is generated by a current running through a respective one of the display electrodes. In particular, as described in paragraphs [0030]-[0036] on pages 9-12 of the substitute specification, "[d]uring the sustaining discharge, the current running through the scan electrode SCN_j and sustain electrode SUS_j and the current running through conductor CW_j simultaneously run in reverse directions with respect to each other. [Therefore, t]he electromagnetic wave generated by the current running through conductor CW_j respectively have reverse polarities and thus perfectly cancel each other" (see paragraph [0034] of the substitute specification). Accordingly, due to this important feature of the present invention, electromagnetic waves generated from the sustain electrode, scan electrode or conductors do not radiate out of the panel. That is, conductors which do not contribute to the display of the AC plasma display panel restrict electromagnetic waves from radiating out of the panel.

In addition, the present invention provides that a dielectric layer 9 is disposed over the second substrate 14 and covers the display electrodes and the conductors 12. Further, a plurality of data electrodes 15 are disposed over the second substrate 14 and are further disposed perpendicular to the display electrodes. A plurality of phosphors 17 are placed along the data electrodes 15, respectively. In another aspect of the present invention, a barrier 19 is disposed on the dielectric layer 9 such that the barrier extends longitudinally approximately parallel with the conductors 12. Since the barrier 19 is disposed on the dielectric layer 9, which covers the display electrodes and the conductors 12 disposed over the first substrate, the barrier 19 is closer to the second substrate 14 than the display electrodes and the conductors 12.

Claim 16 recites a plurality of display electrodes disposed over the first substrate and arranged in rows, where each of the display electrodes comprises a scan electrode and a sustain electrode. Claim 16 also recites that one or more conductors are disposed over the first substrate. In addition, claim 16 recites a dielectric layer covering the display electrodes and the conductors. Further, claim 16 also recites a barrier disposed on the dielectric layer such that the barrier extends longitudinally approximately parallel with the conductors.

In item 3 on pages 2 and 3 of the Office Action, the Examiner asserted that claims 1-8 of Shino et al. disclose an AC plasma display panel with the exception of describing the structure of the AC plasma display panel of claim 16 as comprising "a first substrate, a second substrate, phosphor[s], a dielectric layer, [and] a barrier". Acknowledging that claims 1-8 of Shino et al. clearly do not recite an AC plasma display panel comprising a dielectric layer covering the display electrodes and the conductors, or a barrier disposed on the dielectric layer such that the barrier extends longitudinally approximately parallel with the conductors, the Examiner based his first rejection of claim 16 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of Shino et al. in view of Kanazawa et al on the assertion that Kanazawa et al. cures the deficiencies of claims 1-8 of Shino et al. for failing to disclose the structural elements described above. In particular, the Examiner asserted that Kanazawa et al. discloses the barrier as recited in claim 16.

However, despite the Examiner's assertion to the contrary, Kanazawa et al. does not disclose or suggest a barrier disposed on the dielectric layer such that the barrier extends longitudinally approximately parallel with the conductors, as recited in claim 16. The Applicants respectfully submit that the barrier 58 of Kanazawa et al. is markedly different from the barrier as recited in claim 16. The barrier of claim 16 is recited as being disposed on the dielectric layer. Accordingly, since the dielectric layer is recited as covering the display electrodes and the conductors disposed over the first substrate, the barrier of claim 16 is therefore recited as being closer to the second substrate than the display electrodes and the conductors. In stark contrast to claim 16, Kanazawa et al. discloses a "barrier" (light interceptive members) 58 that are formed in the third slits 73 so as to prevent light from leaking out (see Column 10, lines 23-26, Figure 14,

Column 11, lines 47-51 and Figure 19). The Applicants direct the Examiner's attention to Figures 14 and 18-20 of Kanazawa et al. in which the "barrier" 58 is clearly disclosed as being farther from the rear glass substrate (the "second substrate") than the "scan electrodes" (Y electrodes) 51, the "sustain electrodes" (Xo electrodes) 52o and the "conductors" (Xe electrodes) 52e, which is markedly different from the barrier of claim 16. As described above, the barrier of claim 16 is clearly recited as being closer to the second substrate than the display electrodes and the conductors since the barrier is recited as being disposed *on* the dielectric layer, which is recited as covering the display electrodes and the conductors. Accordingly, Kanazawa et al. clearly discloses a "barrier" (light interceptive members 58) disposed on a dielectric layer which is *not* closer to a rear glass substrate ("second substrate") than the "sustain electrodes" 51, the "scan electrodes" 52o and the "conductors" 52e. Therefore, Kanazawa et al. clearly does not disclose a barrier disposed on the dielectric layer such that the barrier extends longitudinally approximately parallel with the conductors, as recited in claim 16.

Accordingly, Kanazawa et al. clearly does not cure the deficiencies of claims 1-8 of Shino et al. for failing to disclose the barrier as recited in claim 16, and thus, neither claims 1-8 of Shino et al. nor Kanazawa et al. disclose or suggest each and every limitation of claim 16. Therefore, no obvious combination of claims 1-8 of Shino et al. and Kanazawa et al. would result in the barrier as recited in claim 16.

Moreover, the specification of Shino et al. also clearly does not disclose or suggest a barrier disposed on the dielectric layer such that the barrier extends longitudinally approximately parallel with the conductors, as recited in claim 16. Accordingly, Shino et al. does not cure the deficiencies of Kanazawa et al. for failing to disclose or suggest the barrier of claim 16.

Similarly, Yamada also does not disclose or suggest a barrier disposed on the dielectric layer such that the barrier extends longitudinally approximately parallel with the conductors, as recited in claim 16.

Therefore, no obvious combination of claims 1-8 of Shino et al., Kanazawa et al., Shino et al. and Yamada would result in the barrier as recited in claim 16 since claims 1-8 of Shino et al.,

Kanazawa et al., Shino et al. and Yamada each fail to disclose or suggest the barrier as recited in claim 16.

Claim 16, as amended, recites that one or more conductors are disposed over the first substrate, where each of the conductors are adjacent to a respective one of the display electrodes, each of the conductors are spaced from the scan electrode and the sustain electrode of a respective one of the display electrodes, and each of the conductors are electrically connected to the sustain electrode of a respective one of the display electrodes.

Claims 1-8 of Shino et al. and the disclosure of Shino et al., however, do not recite an AC plasma display panel comprising one or more conductors disposed over the first substrate, where each of the conductors are adjacent to a respective one of the display electrodes, each of the conductors are spaced from the scan electrode and the sustain electrode of a respective one of the display electrodes, and each of the conductors are electrically connected to the sustain electrode of a respective one of the display electrodes, as recited in claim 16. Instead, Shino et al., in claims 1 and 5, recites "means for applying a certain current to said scan and sustain electrodes..." while claim 8 of Shino et al. recites "means for applying a certain current to each of said paired scan and sustain electrodes...." In accordance with the disclosure of Shino et al., the means for applying a current to the scan and sustain electrodes is described as each scan or sustain electrode being electrically connected to a respective driving circuit. In particular, the odd scan electrodes of Shino et al. are electrically connected with a scan electrode driving circuit 2a, the odd sustain electrodes are electrically connected with a sustain electrode driving circuit 3a, the even scan electrodes are electrically connected with a scan electrode driving circuit 2b, and the even sustain electrodes are electrically connected with a sustain electrode driving circuit 3b (see Column 8, lines 28-41 and Figure 1). Accordingly, the "conductor" of Shino et al., as interpreted by the Examiner, is not electrically connected to the sustain electrode of a respective one of the display electrodes, as recited in claim 16.

Further, as acknowledged by the Examiner in page 5 of the Office Action, similar to claims 1-8 of Shino et al. and the disclosure of Shino et al., Kanazawa et al. does not disclose, suggest or even contemplate one or more conductors disposed over the first substrate, where each

of the conductors are adjacent to a respective one of the display electrodes, each of the conductors are spaced from the scan electrode and the sustain electrode of a respective one of the display electrodes, and each of the conductors are electrically connected to the sustain electrode of a respective one of the display electrodes, as recited in claim 16.

Therefore, Kanazawa et al. clearly does not cure the deficiencies of claims 1-8 of Shino et al. and the disclosure of Shino et al. for failing to disclose or suggest the conductors as recited in claim 16, and thus, claims 1-8 of Shino et al., Kanazawa et al. and Shino et al. do not disclose or suggest each and every limitation of claim 16.. Accordingly, no obvious combination of claims 1-8 of Shino et al. and Kanazawa et al. or Kanazawa et al. and Shino et al. would result in the conductors as recited in claim 16.

Similarly, Yamada also does not disclose or suggest one or more conductors disposed over the first substrate, where each of the conductors are adjacent to a respective one of the display electrodes, each of the conductors are spaced from the scan electrode and the sustain electrode of a respective one of the display electrodes, and each of the conductors are electrically connected to the sustain electrode of a respective one of the display electrodes, as recited in claim 16. In fact, Yamada does not even contemplate conductors as an element for its plasma display panel. Instead, Yamada merely discloses discharge electrodes 33 each composed of a scanning electrode 34 and a sustain electrode 35 that are arranged at upper and lower locations, respectively (see Column 8, lines 2-5 and Figures 4, 6, 8 and 9-21). Accordingly, Yamada clearly does not disclose, suggest or even contemplate one or more conductors disposed over the first substrate, where each of the conductors are adjacent to a respective one of the display electrodes, each of the conductors are spaced from the scan electrode and the sustain electrode of a respective one of the display electrodes, and each of the conductors are electrically connected to the sustain electrode of a respective one of the display electrodes, as recited in claim 16.

Therefore, Yamada clearly does not cure the deficiencies of claims 1-8 of Shino et al., Kanazawa et al. and the disclosure of Shino et al. for failing to disclose or suggest the conductors as recited in claim 16. Accordingly, no obvious combination of claims 1-8 of Shino et al.,

Kanazawa et al. and Yamada or Kanazawa et al., Shino et al. and Yamada would result in the conductors as recited in claim 16.

Claim 16 also recites that the conductors are arranged so that, when a pulse voltage is applied to the display electrodes, currents run through the conductors in a reverse direction to a current running through the display electrodes. In addition, claim 16 was amended to recite that the conductors are operable to generate an electromagnetic wave having a polarity that is reverse of a polarity of an electromagnetic wave generated by a current running through a respective one of the display electrodes.

Acknowledging that neither Kanazawa et al. nor Shino et al. disclose or suggest that the conductors are operable to generate an electromagnetic wave having a polarity that is reverse of a polarity of an electromagnetic wave generated by a current running through a respective one of the display electrodes, the Examiner, in item 5 on page on page 7 of the Office Action, asserted that Yamada discloses the voltages applied to the scan electrodes 34 an the sustain electrodes 35 of Yamada as having opposite polarities. The Examiner thus concluded that at least one of the "conductors" of Shino et al. has the same polarity of the scanning electrode 34 of Yamada and therefore would have the opposite polarity of the sustain electrode 35 of Yamada.

However, for the reasons identified above, Shino et al. clearly does not disclose the conductors and the display electrodes of claim 16. The display electrodes of claim 16 comprise a scan electrode and a sustain electrode. Shino et al., however, merely discloses a plurality of pairs of sustain electrodes SUS and scan electrodes SCN. The Examiner has interpreted the sustain electrodes SUS to correspond to the conductors of the present invention. Accordingly, based on the Examiner's interpretation of Shino et al., Shino et al. discloses "conductors" SUS and scan electrodes SCN. However, as described above, the data electrodes of the present invention as recited in claim 16 comprise both a sustain electrode and a scan electrode. Shino et al. discloses that a current runs through the "conductors" (sustain electrodes) SUSi-1,a in a reverse direction to the current running through the "conductors" (sustain electrodes) SUSi-1, b (see Figures 11 and 17). Nonetheless, Shino et al. clearly does not disclose or suggest conductors being arranged so that, when a pulse voltage is applied to the display electrodes, which comprise both a sustain

electrode and a scan electrode, currents run through the conductors in a reverse direction to a current running through the display electrodes, as recited in claim 16. That is, Shino et al. merely discloses that currents running through a first sustain electrode are opposite in direction to the currents running through a second sustain electrode, but Shino et al. does not disclose or suggest that conductors being arranged so that, when a pulse voltage is applied to the display electrodes, which comprise both a sustain electrode and a scan electrode, currents run through the conductors in a reverse direction to a current running through the display electrodes, as recited in claim 16.

Furthermore, as described above, Yamada, similar to Shino et al. and Kanazawa et al., also does not disclose or suggest the conductors as recited in claim 16 since Yamada merely discloses discharge electrodes 33 each composed of a scanning electrode 34 and a sustain electrode 35 that are arranged at upper and lower locations, respectively. Accordingly, combining the disclosures of Shino et al. and Yamada et al. would merely result in the "conductors" (sustain electrodes) of Shino et al. having a reverse polarity to the polarity of the scan electrodes of Shino et al. Accordingly, the combination of Kanazawa et al., Shino et al. and Yamada clearly does not disclose, suggest or even contemplate conductors that are arranged so that, when a pulse voltage is applied to the display electrodes, which, as described above, include both sustain and scan electrodes, currents run through the conductors in a reverse direction to a current running through the display electrodes, as recited in claim 16. Furthermore, the combination of Kanazawa et al., Shino et al. and Yamada also clearly does not disclose or suggest that the conductors are operable to generate an electromagnetic wave having a polarity that is reverse of a polarity of an electromagnetic wave generated by a current running through a respective one of the display electrodes, as recited in claim 16.

Accordingly, claims 1-8 of Shino et al., Kanazawa et al., Shino et al. and Yamada each clearly fail to disclose or suggest that the conductors are arranged so that, when a pulse voltage is applied to the display electrodes, currents run through the conductors in a reverse direction to a current running through the display electrodes, and that the conductors are operable to generate an electromagnetic wave having a polarity that is reverse of a polarity of an electromagnetic wave

generated by a current running through a respective one of the display electrodes, as recited in claim 16. Accordingly, no obvious combination of Shino et al., Kanazawa et al., Shino et al. and Yamada would result in the conductors of claim 16 since Shino et al., Kanazawa et al., Shino et al. and Yamada each fail to disclose or suggest the conductors of claim 16.

Because of the clear distinctions discussed above, it is submitted that the teachings of the applied references, either individually or in combination, do not meet each and every limitation of claim 16. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time the invention was made would not have been motivated to modify claims 1-8 of Shino et al., Kanazawa et al. and Shino et al. in such a manner as to result in, or otherwise render obvious, the present invention as recited in claim 16. Therefore, it is submitted that claim 16, as well as claims 21-23 which depend therefrom, are clearly allowable over the prior art of record.

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice thereof is respectfully solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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